United States Senate Committee on Commerce, Science, and Transportation

Hearings on the Transition to Digital Television Broadcasting
Russell Building
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Spectrum Allocation.

1. To say that the transition to digital television is not going well is a bit like saying that Mikhail Gorbachev's *perestroika* is falling somewhat behind schedule. The disastrous failure of public policy is hidden only by lack of news coverage. This problem may be solved when the media come to focus on this issue in upcoming years. The press, of course, loves to cover a good train wreck.

2. Comparing the digital TV transition to *perestroika* is not gratuitous violence. The central planning at the heart of the spectrum allocation system leads the U.S. government, through the Federal Communications Commission, to structure and restructure wireless services from the top down. This system is inefficient, unresponsive to consumer demand, and a huge barrier to entry for new technologies anxious to compete in the marketplace. The consensus among policy economists is that the entire system is in need of substantial reforms allowing wireless bandwidth markets to emerge. In a February 2001 Comment filed with the FCC, 37 economists with expertise in telecommunications and public policy, including Nobel Laureate Ronald Coase, the immediate past chairman of the Council of Economic Advisors, Martin Bailey, and six former FCC Chief Economists,[1] urged regulators to relax licensing rules such that existing operators can use spectrum flexibly and new competitors or technologies can challenge the status quo. This filing is available online: http://www.aei.brookings.org/publications/related/fcc.pdf

[1] The list of signatories includes: Martin Neil Baily, Jonathan Baker, Timothy Bresnahan, Ronald Coase, Peter Cramton, Robert W. Crandall, Richard Gilbert, Shane Greenstein, Robert W. Hahn, Robert Hall, Barry Harris, Robert Harris, Jerry A. Hausman, Thomas W. Hazlett, Andrew Joskow, Alfred E. Kahn, Michael Katz, Robert E. Litan, Paul Milgrom, Roger G. Noll, Janusz Ordover, Bruce Owen, Michael Riordan, William Rogerson, Gregory Rosston, Daniel L. Rubinfeld, David Salant, Richard L. Schmalensee, Marius Schwartz, Howard Shelanski, J. Gregory Sidak, Pablo Spiller, David Teece, Michael Topper, Hal Varian, Leonard Waverman and Lawrence J. White.

The Origins of Digital Television

3. Extending spectrum liberalization to the TV Band is easy at a theoretical level. Industrial policy is anti-competitive and ultimately anti-consumer. Competitive markets include far more nuanced information than FCC rule makings, and are not biased by the political lobbying that pervades that process. When investors decide how to use radio spectrum they are careful to weigh the alternatives, searching for opportunities that may be unseen, undeveloped, or uncertain. They are calculating and relentless in discovering what is possible, what customers are willing to pay for, how much to invest in new technology, and how long to wait for new science.
4. At the specific level of implementation, these trade-offs are crucial. Not only are digital TV sets, stations, and programming expensive to create, the use of bandwidth for digital TV crowds out potentially valuable services like cellular telephony, fixed wireless broadband, or 3G (mobile web services). Since the DTV transition has been mandated by FCC rule makings, entrepreneurs have been prevented from attempting innovative ways to offer new services to the public.
5. The history of DTV already reads like a Russian novel. It was born not in the laboratory, but on K Street, an attempt by broadcasting lobbyists to block land mobile services from gaining access to UHF spectrum in the mid-1980s. High Definition TV was the reason created for freezing any use of idle bandwidth, despite pressing demands for more wireless telephone competition.
6. Over a decade, technical standards were hammered out and complicated transition rules ordained. The result is technology adoption by committee. While a switch-over date has been set in law, no one seriously believes that analog broadcasting will go dark in 2006. If they did, they'd be buying digital TV sets. Yet, of 100 million U.S. TV households, only 50,000 are equipped to receive digital off-air signals.[2] What do consumers know that policy makers don't?

Clamp Down, or Loosen Up?

7. Consumers see high prices and major uncertainties about long-term adoption. They don't want to be stuck with expensive equipment that isn't needed and doesn't receive desirable programming. The seemingly obvious solution is to: (a) mandate digital compatibility for all newly sold TV sets (thereby getting economies of scale to kick in), (b) mandate digital must-carry, (c) eliminate analog broadcasts in 2006. This approach concedes that only through brute policy guarantees will customers embrace digital TV.
8. Don't do it. As policy, this is the ultra-high-risk approach. It assumes that the digital television transition, as mapped out, is the one and true path to consumer satisfaction. And it does so without cross-checks from the marketplace, feedback from customers. Costs to viewers, competitors, and technology creators are eliminated from the analysis. In just one area – digital must carry – these costs may be terribly high, soaking up valuable bandwidth on cable and satellite systems to

[2] Christopher Stern, *Mixed Signals, Broadcasters' Promise of a Digital TV Age has Not Been Met, And Now Congress Is Having Second Thoughts About Its Role*, WASHINGTON POST (Dec. 17, 2000), H1.

distribute programming of little interest to customers.[3] In short, this approach puts us further down the path of industrial policy. It has a high probability of proving disastrous, forcing costs on the economy while blocking more valuable services.

9. The superior solution lies in liberalization, quickly giving new competitors access to radio waves in the TV Band. This can be achieved by giving broadcasters the freedom to offer extensive broadcast and non-broadcast service over both their new (digital) and old (analog) channels. The FCC should immediately allocate all unused TV band airspace to new wireless licenses with broad flexibility. As only 13 analog stations broadcast in the typical U.S. market, even doubling such assignments with digital broadcasting leaves great unused gaps in the 67 channels (402 MHz) allocated to the TV band. These overlay rights would allow new users to access radio spectrum, and should be assigned by competitive bidding. Winning bidders would then negotiate with current users (TV stations) to vacate their positions for a fee. This will create additional bandwidth for new services, such as 3G wireless. It could also unleash vigorous competition to existing broadcasting, cable and satellite services.[4]

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[3] See Thomas W. Hazlett, *Digitizing Must-Carry under Turner v. FCC (1997),* http://www.aei.org/ra/rahazl1.pdf.)

[4] For further elaboration, see my "Essay on Airwave Allocation Policy," forthcoming in the HARVARD JOURNAL OF LAW & TECHNOLOGY: http://www.aei.brookings.org/publications/working/working_01_02.pdf.